



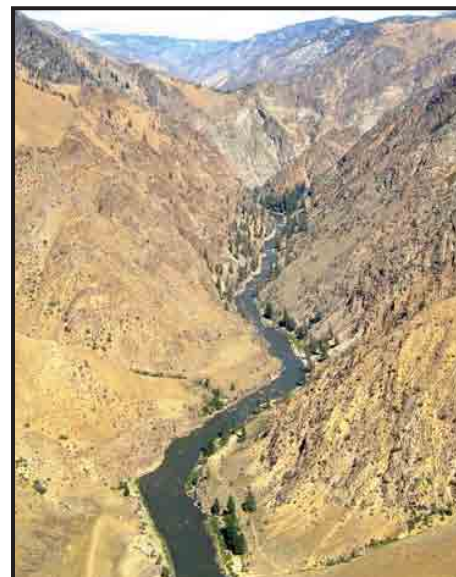
Why I Fly

By Christina Tindle

Flying is an action art that offers priceless views witnessed by few. This artistic expression is in concert with science and balanced by personal challenge, all well suited for a spirited personality. Elrey Jeppesen said, "There is a big difference between a pilot and an aviator. One is a technician; the other is an artist in love with flight." Planes are the aerial paintbrushes flown over airy canvases demanding a commitment to technique, the sort that joins colorful joy with moment of truths. For aviators like me, this romance is the stuff of life. There is nothing better than realizing that heaven exists at 2000 AGL...and below...where

nature's portrait is perfected by strokes of sun angle, shading, and glamorous earth tones.

The most precious images etched in my mind altered the essence of who I am, transformed by flying Idaho's backcountry, where nature is at her finest. Aloft, I escape the noise and frantic-manic-panics about nothing truly important, and merge with the wild: clouds, wind, sun, abeam granite peaks, beneath blue sky. Sitting in front-row cockpit seats for another lofty perspective, the world forms a multicolored collage below. Endless Kodak moments developed in the dark room of my heart revealed a wolf loping across Cold Meadows airstrip, absorbing rough bounces



Impassable Canyon Middle Fork of Salmon. Photo Credit - Christina Tindle

over gopher holes at Chamberlain Basin, tummy-grinning uplifts from sunny ridges, and while camped at Shearer, transfixed by nearby rapids of the Selway River.

I've chopped through turbulence down-drafting Pistol Creek, negotiated goal-post trees landing for precision practice, and banked hard to out-climb a flock of snow geese along my route. Visibility became obscured as my entire windshield was splattered by a fog of bugs. Figure-8 patterns at Cabin Creek delighted, and when reunited with my taildragger after a hike, over 200



Beautiful Big Creek. Photo Credit - Bill Miller

Why I Fly

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From the Administrator:



Remembering Worthie

Like many others, I relish the unique opportunity to meet someone who did the

same job as I did a generation earlier.

Worthie Rausher led the Idaho Division of Aeronautics for 16 years beginning in 1974. Today, his impact is recognized when we run across letters, documents, files, and photos in the office. He was known statewide for the popular Safe Pilot Program as well as his advocacy of the value of emergency aircraft use during the Teton Dam flood.

The first time I heard about Worthie was in a paperback book I read in high school titled, "Sacrament." It tells the story of a 1979 Cessna 172 crash in the Boulder Mountains near Stanley. Worthie led the search and rescue effort over a six week stretch until the two survivors were finally located and rescued. Such dedication sets the standard for the life or death importance of search and rescue that still exists today at State Aeronautics.

Last year, I overheard Worthie was still residing in Coeur d' Alene. With a little investigation, I located his home. A warning came with this search, "Worthie can be a little cranky in his old age" said an acquaintance, "however, I know he'd really appreciate a visitor." I jumped on the next state aircraft flight to Coeur d'Alene, drove to a house a

few miles south of the airport, and knocked on the door. A little nervous about who may answer, I was pleasantly surprised when a charming and distinguished gentleman opened the door and politely introduced himself.

Worthie and I had a ball that day together reminiscing and problem solving over lunch at the golf course and tours of the Pappy Boyington museum, the airport, and our state plane. We talked about the backcountry airstrips, our favorite airplanes, best and worst landings, and places we've been. Even though our tenures were 40 years apart, we laughed at how many people we mutually knew.

Of course, what I remember most is our contemplation about the challenges of State Aeronautics: How to find more funding for airports, elicit cooperation among stakeholders and agencies, and work with limited budgets while constantly promoting the value of aviation in Idaho. "Worthie", I lamented, "sometimes we're barely hanging on here." He just smiled. Not belittling me, but with a smile that said "Chin up young man, you're going to do just fine."

The day ended too soon when I received a call from the passengers who were ready for the return flight to Boise. Before saying goodbye, I gratefully shook his hand and gave him an Aeronautics hat. It was the first and last time I met Worthie. Sadly, he passed away in April, 2016.

A month later at a little league game, I struck up a conversation with an elderly gentleman who had retired as an Idaho National Guard helicopter

pilot. After I elaborated about my job, he commented, "I knew a guy who used to work there once, his name was Worthie Rausher. He was a great man." Feeling honored to have spent that one day with Worthie, I nodded in agreement.

Tailwinds-

Mike Pape

ITD Aeronautics Administrator

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Idaho Transportation Department

Governor C.L. "Butch" Otter

Director Brian Ness

Administrator Mike Pape

Aeronautics Advisory Board

Chairman Rodger Sorensen

Members Colleen Back, Chip Kemper, Dan Scott, and Mark Sweeney

Division of Aeronautics

3483 Rickenbacker St., Boise, ID 83705

Website: <http://www.itd.idaho.gov>, Ph: 208.334.8775

Rudder Flutter Editor: Tammy Schoen

Email: tammy.schoen@itd.idaho.gov

Assistant Editor: Steve Grant

Graphic Design: Pauline Davis, Jared Tuttle

The Idaho Transportation Department (ITD) is committed to compliance with Title VI of the Civil Rights Act of 1964 and all related regulations and directives. ITD assures that no person shall on the grounds of race, color, national origin, gender, age, or disability be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any ITD service, program, or activity. The department also assures that every effort will be made to prevent discrimination through the impacts of its programs, policies, and activities on minority and low-income populations. In addition, the department will take reasonable steps to provide meaningful access to services for persons with Limited English Proficiency.



Why I Fly

Continued from page 1

horseflies were ousted that had taken up residence in my wing struts. I have departed the 1600-foot Solider Bar airstrip into thin air over the 500-foot drop to the river, and recalled details of the opposite rock walls as they loomed closer. Once, I ferried my daughter to a backcountry camp, the only woman to fly-in her child. Surrounding male pilots watched me heft her gear and asked with incredulous eyes which charter I flew for, to which I replied, "Women-Gone-Wild" and got a chuckle from my 10-year old daughter. Accessed only by plane, I've flown to remote trailheads to trek endless miles and discovered happy places hidden therein. From my first landing in the wilderness, mesmerized by a herd of mountain goats balancing on craggy peaks on a final for Upper Loon, backcountry flying became my life purpose.

Thanks to flight, today I am a lover of soul-expanding adventure because it reboots the ordinary with magic. With

every engine start, feet come alive, RPMs accelerate, flaps retract, and another aeronautical oilcloth awaits extraordinary composition as land drops away. As an aviator-artist, I commit to kaleidoscopic life adventure. For in those views, I leave my heart and must always return to reconnect with my deeper self.



Earth's tapestry - Anderson Ranch with Little Camas in the background.

Photo Credit - Tammy Schoen

A Tail Wind is a Misty Hope

*A tail wind is a misty hope
Wrought in a pilot's mind
That some time, once in all the years,
The wind will blow behind;
Will blow from where she thinks she is,
To where she hopes she goes...
Yet pilots know there are no winds
But those upon the nose.*

*'Tis this vague hope that leads her on
Thru' countless years of flight,
To dream that sometime in her life,
The wind will blow just right,
Will blow from where she should not be
To where she hopes she goes...
Yet pilots know there are no winds
But those upon the nose.*

Author: Gill Robb Wilson
Contributed by Gene Nora Jessen



Camping under the wing on a scenic airstrip. Photo credit - Cade Preston



Threat and Error Management - Part 2



**By Cade Preston,
ITD Division of
Aeronautics**

In our last issue of Rudder Flutter, I presented the first half of an article named Threat and Error

Management. I discussed some theories on operational and latent threats. I also discussed the three main types of pilot errors — decision errors (skipping a preflight inspection), skill-based errors (ground looping a tail-wheel aircraft due to improper control inputs), and perceptual errors (misunderstanding a taxi clearance).

Also presented was the first half of a practical tool named the Threat and Error Application Model (TEAM). TEAM is used to help pilots proactively mitigate anticipated (known) threats and simplify the process for handling those that are unanticipated (unknown).

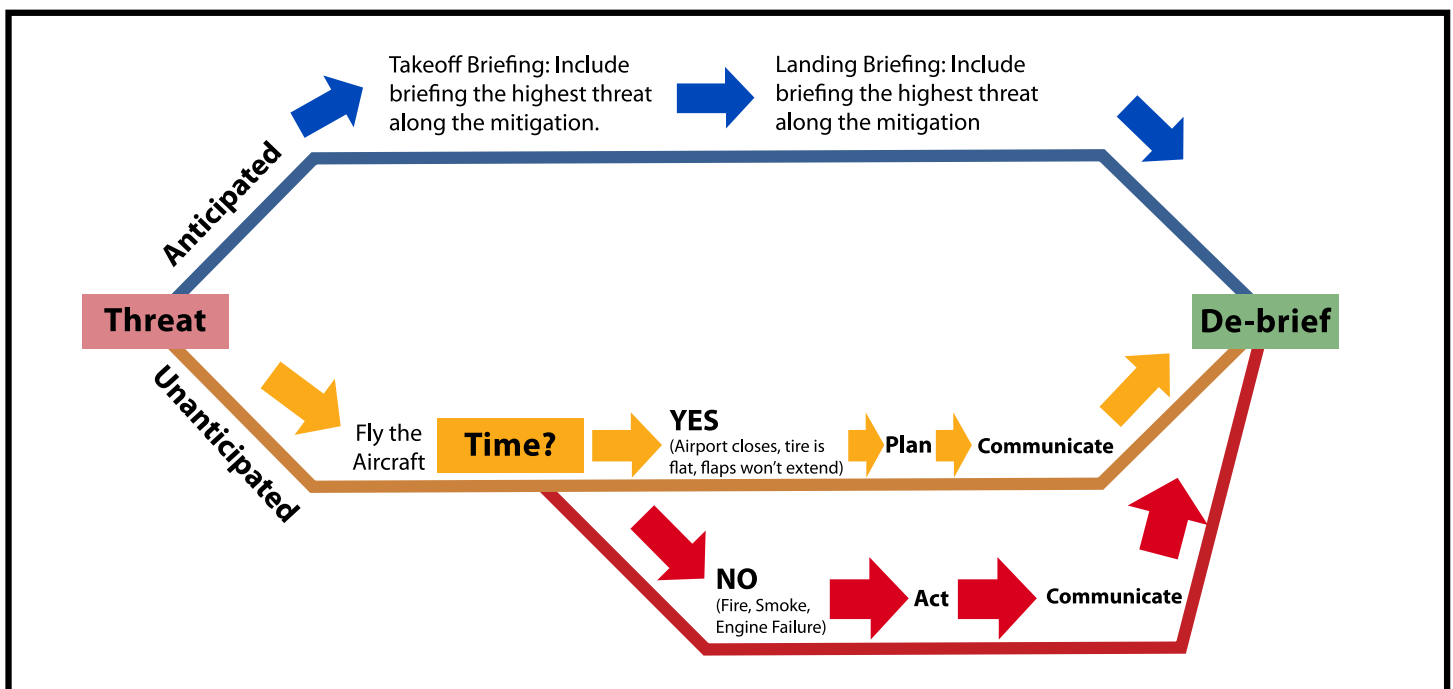
In our June 2016 issue, I presented the half of the TEAM model that addresses anticipated threats. Before reading the rest of this article, now may be a good time to break out that issue and read the article. It sets the ground work for the information which will be presented here. Now let's look at unanticipated threats. (Refer to the TEAM- Threat & Application Model graphic below).

Unanticipated Threats - First and foremost, when an unanticipated threat is encountered, the first priority is to FLY THE AIRCRAFT! After assuring aircraft control, stabilize the situation by performing appropriate emergency procedures and/or checklists. Use of automation can be very beneficial depending on the nature of the threat, and need to control the aircraft.

No Time Threats - These are usually threats that are time-critical in nature and require landing as soon as safely possible. (Even during a NO TIME threat, Threat and Error Management

never requires an aircraft land as soon as possible, but rather as soon as is SAFELY possible.) NO TIME threats require that the pilot-in-command (PIC) have a plan of action in mind to enact as soon as the threat occurs. Some examples of NO TIME threats are fire, smoke, or an engine failure. These threats require the pilot to ACT and ACT NOW!

ACT- There are certain emergency procedures that you should have memorized for your aircraft. In professional aviation, we refer to them as Emergency Memory Items. A pilot is expected to know these items without reference to a checklist. The checklist is used when time permits to back up the emergency memory items. Also, the term ACT suggests that the PIC have a plan of action in mind before an actual NO TIME event occurs. As an example, a pilot of a single-engine airplane (and many light-twin airplanes) should always be on the lookout for an emergency landing site. During an engine



TEAM - Threat Application Model





It doesn't look
too bad down here!

How's it gonna look at
1,000 agl and 120 knots?

You didn't have
any trouble under the
hood on your last
flight review!

When's the last time you
flew in actual without a
CFI as backup?

You can always
turn around and
come back!

If you get in the
clouds, are you
really ready to shoot
an approach?

failure, the pilot will know in an instant where to turn toward while simultaneously performing the Emergency Memory Items for a failed engine.

COMMUNICATE-
The importance of communication cannot be overemphasized. Communicate the plan of action as necessary to your passengers and ATC. If needed, make a MAY-DAY call. Depending on the situation, you may want to give your passengers a responsibility, such as holding a checklist out in front of you so you can have two-hands free.

Time Threats - These include any threat to the safe operations of a flight that is not time critical. Examples include a flap failure, a generator/alternator failure, deteriorating weather, last-minute changes to landing direction at an airport, and more.

A vast majority of threats to a flight are TIME threats. Pilots should recognize that very often, they have ample time, or the ability to create additional time, to effectively manage most threats. TIME threats are not critical in nature and allow the pilot time to fully evaluate a new plan of action. Misdiagnosing a

TIME threat and/or rushing through a plan of action (i.e. abnormal checklists) are one of the most common errors pilots make. SLOW DOWN! Take your time in developing a plan.

If you are flying with another pilot, you may want to give the controls to him/her, while you deal with the threat. A pilot can greatly reduce their risk for task saturation and potential for error if he can divide the duties in the cockpit. One pilot performs the duties directly related to aircraft control, including responding and adhering to ATC clearances. The other develops the plan of action for dealing with the threat. In a professional crew environment, the second-in command flies the aircraft and the PIC develops the plan of action and "calls all the shots." Extensive industry analysis confirms an increase in crew errors when the PIC attempts to manage the threat while simultaneously controlling the aircraft.

TIME threats can be easily prioritized by using the TEAM model. Time, Plan, and Communicate outline the priority of dealing with the threat.

TIME - Create more time to consider a plan of action. Ways to create more time are often dictated by phase of flight. For instance, you can slow

down, request ATC vectors, or circle an area (enter a hold under IFR). Keep in mind that fuel load must be considered when creating time to make a plan.

PLAN - Expand your team. Use passengers, ATC, and onboard resources (Pilot Operating Handbook, iPad, emergency/abnormal checklists) to formulate a plan of action. Sometimes thinking out loud may help in the planning process.

COMMUNICATE - Again, communication cannot be overemphasized! Communicate the plan of action to all involved (the other pilot, passengers, ATC, emergency ground personnel, etc.) and ensure EVERYONE knows the plan. Remember, you have time!

DEBRIEF - The last step of the TEAM model is the DEBRIEF. Don't overlook it! This is your chance to evaluate the threats you encountered and determine if the steps you took were appropriate and adequate. It is also your chance to determine what you might do differently next time.

Well, there it is folks! I promised you a practical, easy-to-use tool for Threat and Error Management. I hope you find room for it in your toolbox.



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- Safety is highest priority: Monthly safety articles, safety meetings, and minimum monthly flight requirement.
 - 16 seasoned flight instructors offering all levels of training.
 - New students are always welcome at the most economical rates.
- Its a fun, friendly club! That means social events like fly-ins, plane washes, Poker Runs, BBQs, and more.



1974 Cessna 172M \$68/hr



1974 Cessna 172M \$70/hr
IFR



1978 Cessna 152 \$55/hr



1946 Aeronca 7AC \$49/hr



VOR Decommissioning by FAA

By Christian Lambert

The FAA has plans to decommission VORs and RCOs that are lesser-used or redundant in the National Air Space in order to move away from ground-based navigational aids and more toward satellite-based navigation. The plan is to create a *minimum operational network* (MON) to serve as emergency backup in the event of failure or widespread navigational outage. Maintenance costs on VOR equipment far exceed the operational benefits of its use. As many as 235 VORs will be taken out of service by 2025.

VOR Decommissioning will take place in 2 Phases:

- Phase 1: Retirement of 74 VORs through FY2020
 - o At this time, the FAA has released only 35 VORs to be decommissioned of the 74 in Phase 1, none of which will affect Idaho.
- Phase 2: Decommissioning of 234 more VORs from FY2021-2025
 - o This phase will affect Idaho Airports and associated instrument approach procedures (IAPs). *COE, Coeur D'Alene VOR is being considered for removal in this phase.

The FAA has released plans for the retiring of Radio Communication Outlets (RCOs). 666 of more than 2,100 RCOs in the continental U.S. are planned for decommissioning beginning in 2017. Below is a list of all RCOs to be decommissioned throughout the State of Idaho.

ID	Site Name	State	Freq. (MHz)
QVA	Ashton	ID	122.000
QVA	Ashton	ID	123.625
QUP	Bliss	ID	122.000
BOI	Boise	ID	122.200
MLD	Malad City	ID	122.000
QUL	Squaw Butte	ID	122.000
QUL	Squaw Butte	ID	122.450
QUL	Squaw Butte	ID	133.025

*A full list of VORs and RCOs to be decommissioned nationwide can be found here along with more info:

http://download.aopa.org/advocacy/151123_VORs_Approved_for_Discontinuance.pdf?_ga=1.136303281.1656040280.1469556398

http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/systemops/fs/media/RCO_Master_List.pdf

<https://www.federalregister.gov/articles/2016/07/26/2016-17579/provision-of-navigation-services-for-the-next-generation-air-transportation-system-nextgen>



Aviation Medical Matters

A Flyer's First Aid Kit

By: Paul Collins, MD, AME and
Mike Weiss, MD, MPH, AME, CFII



We are often asked what kind of first aid kit a pilot should buy. To some extent, that is like asking what kind of tools you should buy. The answer is the same, it depends what you want to do with them.

The best tool a pilot needs to maintain their airplane is a good A&P. The best tool to have as a pilot, especially if you fly in the back country, is a functioning, registered 406 MHz ELT

and a paid membership in Air St. Lukes or Lifeflight. If you or a passenger suffers a significant injury or sudden illness, there is no substitute for getting competent and fully-equipped medical assistance on-site ASAP, along with rapid transport to a hospital!

Of course, they won't get there as fast as an ambulance in a city after a 911 call, so you need to be able to keep the victim alive until help arrives. That means taking a basic CPR course from the Red Cross, the YMCA or your local hospital. If you have never done this, or feel in need of updating your training, ask around. Classes take just a few hours, are held frequently and usually are free.

That being said, there are a few items you might want to have on hand for lesser contingencies. What equipment

and supplies you keep on hand, just like the tool question, depends on what you want to do. Stuff you don't know how to use, or have no intention of using, is just extra weight.

Step 1 is to get a first aid guidebook. The Division of Aeronautics gave away a nice one at a meeting several years ago. It is a plastic, spiral-bound booklet 3 ½ inches by 4 ½ inches and weighs just a few ounces. It fits easily in the coffee can survival kit in the plane. Most book stores have something like this. Find one you can relate too. If it causes you to fall asleep while reading, it will greatly slow down the provision of first aid.

You should carry a few supplies specific to first aid. These are mostly available at one of our favorite discount medical supply stores, Harbor Freight Tools.



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- A bright headlamp is very useful, especially if an injury occurs at night.
- Rubber gloves are nice, especially if your patient is bleeding or you have to poke around body crevices. It will also help protect your subject from your own dirty hands.
- A good knife and a blunt scissors are very useful for cutting away clothing or debris to get access to a wound and to cut up dressings to cover a wound (We'll get to this in a bit).
- A couple of N95 paper masks are a good idea. These filter out 95% of bacteria, viruses and pollen (hence the name). It can protect you and make you feel like a doctor, but your subject may need to use it if they are reacting to a pollen allergy or there is smoke, dust or fumes in the area.
- Incontinence sheets, which are 2 1/2 by 3 foot plastic sheets with a layer of cotton padding on one side are great and much less expensive than gauze dressings. These can be cut up to make any size bandage with the cotton side towards the wound. They cost about 50 cents apiece at most drug stores and one or two in a kit are plenty.
- Surgical quality duct tape (100 mph aviation quality duct tape can also be used- hint, all duct tape is essentially the same). Duct tape can also be cut into small strips to use as sutures to close a laceration.
- Heavy duty, 39 gallon black plastic garbage bags. These can be stuffed with clothes, sleeping bags, pine boughs or leaves, reinforced with

sticks, and molded together with duct tape to fashion a variety of braces, splints and pillows.

- A space blanket is useful to keep an injured or sick person warm and protect them from the elements.
- Water to drink with a bit of sugar and a pinch of salt, if available, to keep them hydrated.
- A small tube of triple antibiotic ointment for minor cuts and bruises.

The petroleum base of the ointment helps keep dirt out of the wound after it is cleansed with clean water (it doesn't have to be sterile).

- A small tube of Hydrocortisone cream is great for bug bites or for someone having an allergic rash.
- Other medicines to consider having include
 - o A few aspirin to help with pain and swelling after a sprain or strain, but also can be given if a person develops severe chest pain and a heart attack is suspected.
 - o Generic Tylenol (acetaminophen) is an alternative for pain relief only, if bleeding may be a problem or if the individual is a child.
 - o For allergic reactions, carry a few pseudoephedrine (Sudafed) and chlorpheniramine (Chlor-Trimeton) or diphenhydramine (Benadryl) tablets. These come in single dose, plastic bubbles. If these are kept out of the sun and in a dry place they will last for years.
 - o Bee sting kits are great, but require a prescription and go out of date pretty fast. If someone in the group has a history of severe allergic reactions to bee stings or the like, it is probably a good idea for that person to carry one.
 - o Pepto Bismol tablets are useful for diarrhea or indigestion.
 - o DEET and sunblock, and, maybe a snake bite kit, throw in a couple of band aids and it is complete.

Remember, unless you need to pull an injured person out of or away from a potential fire, leave the injured as you found them. Injuries can be covered with a dressing or splinted in place. This is especially true for potential spine fractures, when unnecessary movement can turn a fracture into a spinal cord injury. If you have time, move the spine as a block, with a neck brace and a flat, rigid piece of wood, plastic or metal under their spine.

Raise their legs or put their head down to keep their blood pressure up if they have a significant injury, even if they are not bleeding.

Anyone who may possibly need emergency medicine for a particular condition should carry it with them. It is not possible for a first aid kit to cover all contingencies. Antibiotic pills might be considered. These also require a prescription and go out of date pretty quickly. Many people have allergies to common ones so their use may not be worth the risk. Infections take awhile to develop, so, hopefully you will not be waiting for rescue so long as to need antibiotic pills (see the note on the 406 MHz ELT above). All of this shouldn't cost you more than a few gallons of Avgas.

Of course, like survival kits, the best and most complete first aid kit will do you little good if you jump out of the plane after a crash and watch it go up in flames from a safe distance. Keep it handy to grab as you exit or carry some essential supplies in your survival vest.

Flyer's First Aid Kit

Continued on page 23

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ACE Academy - Quarter Century of Outreach

The Division of Aeronautics was recently recognized for 25 years of dedication to reaching out to teenagers throughout the Gem State and presenting career options in the field of aviation. In a quarter century, the Aviation Career Education (ACE)

Academy presented career options to 655 Idaho teenagers.

Thank you to everyone in our aviation community who has made this event possible for so many years – you are the true recipients of this award!



Radio Chatter

By Tammy Schoen, Editor

KSUN News

At an informal gathering at KSUN, Rick Baird, retiring airport manager, was praised for his successes at KSUN and his willingness to give of himself in service to his local communities. Rick responded with a heartfelt thank you to his staff, his parents and family for making it possible for him to give his time to benefit the airport and the community.

It was also announced that Chris Pomeroy will step into Rick's shoes

– which is no small task. Chris and his wife Mandy will relocate to Blaine County.



New KSUN Manager, Chris Pomeroy and his Wife Mandi



Rick Baird Retires

Airport Closure

KSUN will be closed at 8:00 am, Monday, October 3 through 5:00 pm, Wednesday, October 5

Boise Airport

Boise Airport recently launched their new website. It is beautiful and very easy to navigate. Same web address, www.iflyboise.com.

Bernard USFS Work Party

The Bernard airport was closed from May 7-11 so that volunteers could assist US Forest Service personnel paint boundary markers, relocate the outhouse, cut brush and move two boundary markers. Runway surface improvements were also done using teams of draft horses and "traditional" earth moving implements to re-work the runway centerline, primarily on the north end.

Airport Courtesy Cars

You can choose your state to see what airports have a courtesy car available, find fuel discounts and get information on other aviation related links. Search Airport Courtesy Cars in your app store or go to the website: www.airportcourtesycars.com.



Did You Know

In Bicknell, Tennessee it is against the law to eat ice cream in the local airport with a fork.

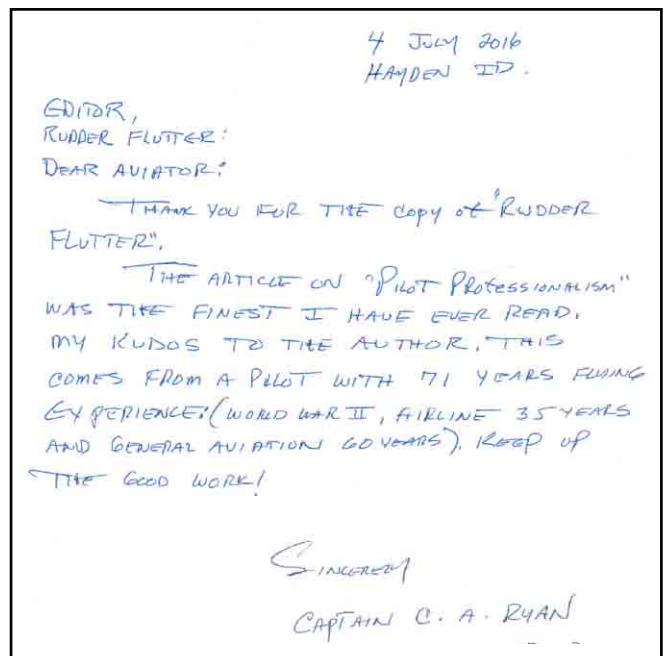
Congratulations!

- **Alana Erickson** – Took her Airplane Single Engine Land Commercial Practical Test on May 20.
- **Travis Shelton** – Soloed June 15th and will complete the solo flying requirements and be ready for his checkride soon.
- **Dave Thomas** - Passed his private pilot checkride on June 16th.
- **Micah Stoddard** - Passed his ATP check ride on 6/18/2016.
- **Taylor Morgan** – Soloed June 19th at the Boise airport.
- **Rachelle Connell** - Passed her ATP check ride on July 9th in PA34-220T Seneca III.

- **Brad Wood** - Passed his Commercial Pilot check ride on July 8th.
- **CFII Aaron Hassemer** - Earned his multi-engine commercial certificate on Saturday, July 23rd.
- **Matt Conklin** - Is now an ATP (Airline Transport Pilot).
- **William Foote** - Accomplished the PhD of flying and earned his ATP on Saturday, July 30th.
- **Steve Boatman** - Passed his private pilot checkride on August 14th.
- **StaciLei Tyau** - Passed her Private Pilot check ride on August 15th.

Kudos!

It is always fun to get a note of thanks from our friends.



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Chad M. Frei

By **Richard H. Holm Jr.**

Idaho aviation lost a great friend and aviator on April 23 – Chad M. Frei, age 39, of Grangeville, because of an automobile accident. Chad was well known within the aviation community, and outside it in the areas of the Camas Prairie and the Lewiston-Clarkston Valley. His relaxed and friendly demeanor was contagious. Chad owned and operated his own aerial agricultural-spraying business at Fenn, a private field northwest of Grangeville, which he bought in 2008. Chad flew the spring season from here and then relocated during the summers to Burley.



Chad Frei - Snake River - April 1, 2015

Chad's passion for aviation began at a young age and he took informal lessons from his father, Mike. By the time he was in high school, he sought further instruction and his license from legendary pilot Frank Hill, who owned Grangeville Air Service for more than 30 years. Every time he

had the chance, Chad flew with Frank. Their relationship was further solidified when he married Frank's granddaughter, Jayci.

In the cockpit, Chad gleaned as much as he could from the quiet and reserved Hill and his approach to flying, especially in the backcountry – skills and knowledge that paid dividends throughout his aviation career.

Not long after high school, Chad and Jayci started their first aerial-application business and bought Hill's old quonset hut hangar in Grangeville from an intermediate owner. Meanwhile, he worked on obtaining his commercial pilot license

and not coincidentally, took one of his earliest pilot jobs at McCall Air Taxi, flying for Mike Dorris, an expert in backcountry aviation.

"A few pilot friends told me about this young kid who wanted a job, and I kept telling them and myself he doesn't

have enough hours" Dorris said. "But the response was – just go fly with him. I did, and all I have to say is he [Chad] was the lowest-time pilot I ever hired. He was just a natural."

To be acknowledged as a "natural" in the aviation community is the highest of all accolades describing a pilot's capabilities, especially when bestowed by Dorris. Chad flew for Dorris seasonally for nine years. When not flying the backcountry, Chad worked for Valley Air Service, owned by Bill and Gary Hubler, and learned the aviation ag-business primarily from Hubler employee Tim Shamblin. Chad became associated with the Pacific Northwest Aerial Applicators Alliance, where he served on the board of directors and as president.

In addition to flying turbine-powered spray planes, Chad rebuilt a no-frills 1954 Cessna 180 that he flew in the backcountry at every opportunity. In his short life, he visited nearly every airstrip in the mountainous regions of Idaho and neighboring states from the southern end of the Boise River Mountains north to the Canadian border. He never boasted about his accomplishments. A few years ago, however, I did ask him if he had been to a particular airstrip in the Wallawas. He readily admitted that it was one to which he had never been. Days later, he emailed a picture of his 180 at the strip. And he had done it with skis!

Chad was one of few contemporary backcountry pilots in Idaho who mastered the art of ski flying, especially on commercial and non-commercial levels. He was primarily self-taught. Ski flying is considered one of the most challenging, especially at the high elevations encountered in the backcountry. Chad's equipment made it even more challenging. He used Airglas skis, or what he called



“poor man skis” — relatively inexpensive and fixed with the wheel penetrating half above the ski and half below — allowing takeoffs on hard surface runways or un-improved snow. But he admitted they did neither one well. Most people would not believe it, but Chad operated his 180 with the Airglas skis at the most difficult airstrips in the backcountry — including Concord — at 7,700-foot MSL, the second highest airstrip in the state. For those who doubted, he was a consummate photographer.

Chad ate, breathed, and lived aviation. He enjoyed sharing it with others — constantly flying friends and family, introducing young kids to the joys of aviation. I was indeed no exception; he donated much flight time in his beloved 180 to my projects. I met him through my work of preserving and recording Idaho aviation history. Since we had many of the same interests, we quickly kindled a relationship. His generosity and enthusiasm toward my endeavors was incomparable — he not only



Chad Frei 43J take three - T. Shamblin Photo

shared what would have been long-forgotten stories passed down from Frank Hill, but his own experiences, knowledge and wisdom.

With certainty, among his most proud accomplishments, was teaching his son Josh to fly. Josh soloed at seventeen and earned his license before graduating from high school. This past winter he was checked out on a number of airstrips for ski flying.

Chad is survived by wife Jacyi, son Josh, daughters Claire and Emily, and a large immediate and extended family.

To honor Chad, his aviation friends gathered a group of four airplanes to fly a “Missing Man Formation” over his grave site in Grangeville as a final farewell. All of the planes represented something important to him in his career. A Cessna 414 piloted by George Parker III/Pete Fountain led the flight, followed by a Cessna 185 piloted by

Mike Dorris/Richard Holm Jr., Chad’s AT-602 piloted by Brandon Visser, and a Cessna 180 piloted by Dave Shallow/Dan Rieger. On the somber rainy spring day as the flight approached the cemetery, it was Chad’s AT-602 equipped with a smoke system that split from the formation and faded over the rolling prairie toward the mountains.

Chad M. Frei, a true “natural,” will be missed by his many friends in the aviation community.

For once you have tasted flight you will walk the earth with your eyes turned skywards, for there you have been and there you will long to return — da Vinci



Chad Frei + 180 - Concord 2016 - C. Frei Pictures



The Unmanned Aircraft Systems Maze - Part 2



**By Santiago Guerricabeitia,
ITD Division of
Aeronautics**

Having covered the personal use of UAS's in my first article, it

follows that some of you will want to use them in your business or to make money. The final rule for commercial UAS was implemented in August. AC 107-2 covers all commercial UAS requirements and can be downloaded from the FAA website. Following this

process will earn you a Remote Pilot Airman Certificate with a small UAS Rating. You can get this license in one of two ways:

1) If you are a certified pilot with a current flight review, it's simple, easy and free. All you have to do is:

- Be at least 16 years old.
- Complete the small UAS online training course, which can be done, right now, at:

<http://www.faasafety.gov>. This will generate a numbered completion certificate to be used in the application process.

- Be vetted by the TSA (Done when applying for license).



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- Complete the online application (8710-13):
<http://iacra.faa.gov/iacra/iacra/>
- Validate identification with FSDO, FAADPE, ACR, or FAA CFI.
- **It's that simple.**

- Group 1 above needs to keep a current flight review and retake the online training course (free).
- Group two needs to take the Aeronautical Knowledge test again (about \$150).

register your UAS prior to commercial operation.

Note: Prior to first-time use, you will need to register at both faasafety.gov and IACRA sites.

2) If you are not able to get a flight review or do not have a pilot's certificate, the process is more involved and not free.

- Be at least 16 years old.
- Complete a self-study or an online course in order to pass an Aeronautical Knowledge Test (about \$150) at a testing center (same places that test for other licenses). This test covers the reference material at
http://www.faa.gov/training_testing/testing/acs/.
- Complete online application (8710-13):
<http://iacra.faa.gov/iacra/iacra/>
- Be vetted by the TSA (Done when applying for license).

Recurrent training is required every 24 calendar months.

If you have not done so already, (for recreational use), do not forget to



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2016 Aviation Art Contest Winners

By Laura Adams

The Division of Aeronautics congratulates the winners of the 2016 Idaho Aviation Art Contest. This year's theme "Flying Saves Lives" proved to be especially

popular with 115 entries from children all over the state. Exceptional talent made it difficult for our judges, and tie breakers were called upon to make the final determinations.

First-place winners were invited on an airplane ride, in addition to participating in an award's ceremony during the Ace Academy in June. Along with a framed congratulatory letter, Gov. C.L. "Butch" Otter signed a printed copy of their art work.

14-17 year-old category:

Haley, Meridian

10-13 year-old category:

Grace, Meridian

7-9 year-old category:

Jonah, Hansen

5-6 year-old category:

Noah, Garden Valley

Second-place winners also received a letter from the Governor, along with a \$25 gift certificate for art supplies.

14-17 year-old category:

Riley, Meridian

10-13 year-old category:

Hunter, Meridian

7-9 year-old category:

Gage, St. Anthony

5-6 year-old category:

Tavia, Garden Valley

Honorable Mention:

14-17 year-old category:

Brooke, Meridian

10-13 year-old category:

Carlos, St. Anthony

7-9 year-old category:

Gertie, Garden Valley

5-6 year-old category:

Rhett, Garden Valley

To obtain information about the 2017 Idaho Aviation Art Contest, email laura.adams@itd.idaho.gov.

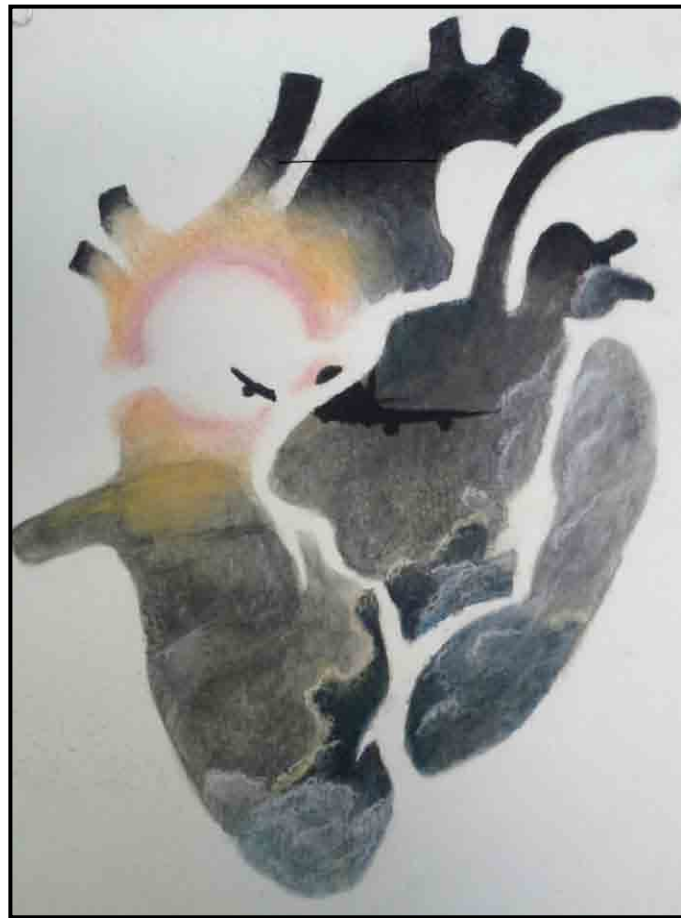


14-17 category - 1st, Haley, Meridian





7-9 category - 1st, Jonah, Murtaugh



10-13 category - 1st, Grace, Meridian



5-6 category - 1st, Noah, Garden Valley





NTSB

SAFETY ALERT

National Transportation Safety Board

Visual Illusions: The ground may be closer than it appears

Prevent controlled flight into terrain in flat light and whiteout conditions

The problem

Flight operations in geographic areas that are susceptible to flat light and whiteout conditions can lead to accidents, as visual references are greatly reduced for pilots.

- Flat light occurs when the sky is overcast, especially over snow-covered terrain and large bodies of water. In flat light conditions, no shadows are cast and terrain features and other visual cues are masked, making it difficult for pilots operating under visual flight rules (VFR) to perceive depth, distance, or altitude. The photograph in this figure shows how these conditions combine to create an

environment where it is difficult, if not impossible, to distinguish the sky from the ground.

- Similarly, whiteout conditions can occur in areas with snow cover. Pilots can experience a loss of depth perception and become spatially disoriented, unable to maintain visual reference with the ground and unaware of their actual altitude.

What can pilots do?

- If possible, look for, use, and don't lose sight of multiple visual reference points.
- Obtain an instrument rating and become proficient and comfortable with operating in instrument

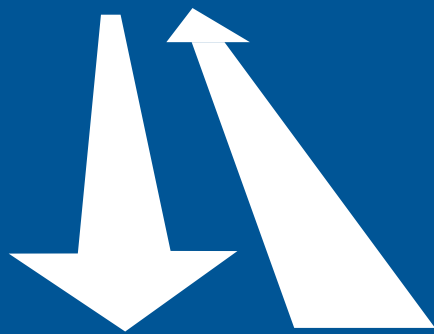
meteorological conditions (IMC). Trust the cockpit instruments and develop good cross-check practices.

- Understand that the ability to judge the height and determine the contour of terrain is difficult in conditions where the sky and ground (or water) are similar in color. When landing on snow-covered terrain, conduct an overflight and consider using weighted flags or other markers that can be dropped from an aircraft and provide contrast. Shorelines may also provide needed contrast.
- If you regularly fly in snowy conditions, become proficient and comfortable with taxiing, taking off, landing, and conducting en route maneuvers and go-arounds in areas with snow. If visibility drops, use your instruments and land at the nearest suitable airport. SA-052 March 2016.
- Install instruments that can enhance situational awareness (for example, radar altimeters, ground proximity warning systems, onboard weather systems, and GPS displays).
- Check all available weather sources before and during a flight. Study the flight routes and avoid potentially hazardous areas (such as rapidly rising terrain, towers/wires, and large open water areas), particularly if the weather is conducive to flat light or whiteout conditions.
- Set and use personal minimums, taking into account your skill level and the demands of a situation. Sticking to your personal minimums helps manage risk.
- Use other sources of information during a flight to determine the weather conditions (for example: company dispatch, other pilots operating in the area, or weather cameras that may be in place, particularly in Alaska).



Photo of an accident site showing the visual effects of flat light and snow-covered terrain.





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Please RSVP to Idaho Division of Aeronautics
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Buyers Beware, Sellers Take Care

By Laura Adams

Aircraft sales and transactions have remained fairly consistent over the last few years. A recent aircraft purchase always seems to be a hot topic among pilots, but I rarely hear talk of the process leading up to the purchase or sale. Of course, when this ends up being a regrettable decision, we all hear about the woes. The plethora of related inquiries we receive at Aeronautics on this topic prompted me to ask an expert for some advice.

There is no one at the Boise Airport who has more experience in aircraft sales than Bill Scherer, our neighbor at Jackson Jet Center. As a pilot who has flown for more than half a century with an extensive background in both aircraft sales and accounting, Bill knows precisely what challenges buyers and sellers face, and how to “make the best of it” in today’s market. He provided

answers to the questions I’m frequently asked...and then some.

“We’re all familiar with the slogan, ‘Buyers beware, sellers take care,’ Bill said, but generally most don’t know much about this tangible reality until they find themselves overwhelmed by how involved and time-consuming aircraft transactions can be.” To me, Bill’s detailed advice indicates this process is not quite as simple as posting an automobile on Craigslist. It sounds more like buying or selling a home with the additional requirement of technical savvy. Most of us rely on reputable real estate agents to either supplement our limited knowledge, time, and effort, or all of the above. It makes sense to use a comparable resource such as an aircraft dealer or broker to purchase or sell an aircraft. An experienced agent can breeze you through either process. Fees generally correspond to the size and value of the aircraft.

Advice to Buyers: Advertised prices are no indication of what sellers are accepting. There is no real easy way to determine prices. “Beauty is in the eye of the beholder.”

1. Consider the purpose and use of the aircraft: pleasure, business, cross-country, fuel endurance, backcountry, cargo space, ease of entry or loading.
2. Anticipate ongoing costs associated with operation and maintenance.
3. For business use, realistically factor in the value of your time.
4. At a minimum, consult with other aircraft owners. First-time buyers should definitely engage a broker or dealer.
5. Search for the most suitable aircraft within your budget.
6. Do a pre-purchase inspection of the plane and log books. Hire an AI to help with this.
7. Complete paperwork associated with federal and state registrations, taxes, liens, and insurance.

Advice to Sellers: Since 2008, the market value for most used planes has gone down. Do not expect to receive the high price you paid prior to that. While the market has leveled off somewhat, your aircraft is aging. Only classics, warbirds and certain high-demand planes are still worth what you may have paid.

1. Advertise
2. Gather your repair receipts and logs
3. Respond to inquiries
4. Answer technical questions
5. Provide demonstrations
6. Ensure pre-purchase is fair
7. Know market conditions
8. Close the deal

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9. Collect money, make distribution, pay off loans
10. Complete paperwork associated with taxes, liens, and insurance.

Answers to FAQs

- **Brokers:** No federal registration is required of brokers. Idaho requires aircraft dealers and brokers to register, and both are required to have an Idaho Sales Tax permit and to remit sales tax.
- **Registration:** Federal registration is required at the time of purchase. It costs \$5 every three years to maintain the N-number. There is no charge for recording the bill of sale. The state collects an annual fee of three cents per pound of maximum certified gross weight. **(Contact Idaho Aeronautics, 208-334-8775).**
- **Taxes & paperwork:**
 1. Private business and pleasure users are subject to a six-percent Idaho sales tax even if the

aircraft is bought out-of-state. If tax is not included in the purchase process, expect a bill from the Idaho State Tax Commission. There is no federal tax due on purchases.

2. Certain operators of commercial aircraft may be entitled to an exemption, but their customers may be charged a use tax.
3. Aircraft used for both personal and business are subject to federal depreciation regulations. At the end of the year, with submission of detailed travel logs, business accountants prorate the operating expense against the hourly use.
4. When you sell to an out-of-state buyer, obtain a signed Idaho ST-101 form to protect yourself from the obligation to collect and pay the six-percent Idaho sales tax.
5. After completing the sale, mail the federal aircraft registration certificate to the FAA to reflect change of ownership **and**

contact Idaho Aeronautics to let them know you have sold the plane.

- **Liens:** Liens are recorded with the FAA in Oklahoma City. Lawyers suggest recording the lien with the state as well for added protection to the lender. Running a title search with a title company in Oklahoma usually costs less than \$100.
- **Insurance:** Like many states, Idaho does not require insurance for liability or hull, although lenders require it. Carrying liability is wise. An excess policy and hull is recommended for those with greater assets.
- **Payment:** There are several ways to receive hard funds prior to aircraft delivery.

Buyers Beware

Continued on page 23



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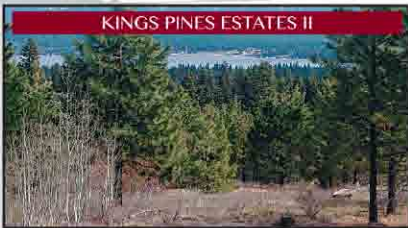
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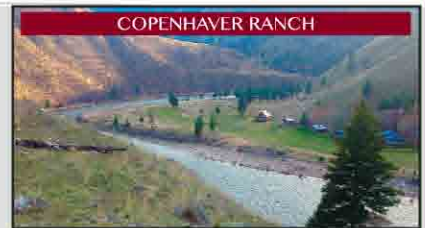
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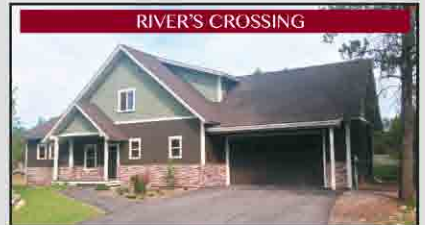
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HANGARS FOR SALE! - McCall Municipal Airport. Call for a list!



Buyers Beware

Continued from page 21

1. For larger sales and buyers in foreign countries, it is common to use an Oklahoma City title service company to set up an escrow account. The seller sends the bill-of-sale to the escrow, and the buyer or lender deposits the funds. Once the plane is accepted after pre-purchase and each party is satisfied, the escrow holder

transfers the funds and handles the paperwork.

2. As your middleman, a broker can collect the money, deliver your bill-of-sale, deduct commission, and pay you the difference. The broker can also pay off any loan, secure the release of lien, file with the FAA, collect sales tax, if any, and remit it to the state.

Do-it-yourself, but be aware of the many scams involved with accepting payment directly. Representing yourself in court is akin to sale by owner.

Flyer's First Aid Kit

Continued from page 9

If assembling an inexpensive first aid kit is too much hassle, you can buy one of those little commercial first aid kits for \$10 or more. They usually are a flimsy red plastic with a white cross on it. Generally, they contain a few small squares of white gauze, a couple of packets of antibiotic ointment and alcohol wipes, a few band aids and a folded paper sheet of first aid instructions.

They are better than nothing, but not much.

Finally, if you always wanted to be a surgeon, but couldn't pass biochemistry, there is a book written in 1970, but updated last year for isolated villages in developing Central and South American countries titled, "Donde No Hay Doctor" (Where There is No Doctor). It is available in English as a PDF for your computer tablet. It gives detailed instructions for handling everything from appendicitis to child birth. Just make sure your malpractice insurance is paid up.

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Aviation Art Contest now open!

The Aviation Art contest is open for young artists from 5 - 17 years old. Entry deadline is March 31, 2017 and the theme this year is : Aviation Recreation.

An entry form can be obtained by contacting Laura Adams at 208 - 334 - 8775 or laura.adams@itd.idaho.gov



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ADDRESS SERVICE REQUESTED

Aviation Photo Contest

Submit your best photo depicting

"My Idaho Backcountry"

How to enter:

- Facebook - Idaho Division of Aeronautics page, click on events, add your photo there, **or**
- Email to laura.adams@itd.idaho.gov (include name, email address and phone number)

Please be sure to include information on location and subject matter.

Contest deadline: Nov. 15, 2016

Contact Laura Adams (208) 334-8775

